

Translation

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PCT/DE2003/003571



# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2001.0071PWO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE2003/003571	International filing date (day/month/year) 27 October 2003 (27.10.2003)	Priority date (day/month/year) 25 October 2002 (25.10.2002)
International Patent Classification (IPC) or national classification and IPC A61C 1/08		
Applicant SIRONA DENTAL SYSTEMS GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

**CORRECTED  
VERSION**

Date of submission of the demand 19 May 2004 (19.05.2004)	Date of completion of this report 29 December 2004 (29.12.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/003571

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1-12 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_ 1-7 \_\_\_\_\_, filed with the letter of \_\_\_\_\_ 18 October 2004 (18.10.2004)
- ☒ the drawings:  
pages \_\_\_\_\_ 1-7 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-3, 5	YES
	Claims	4, 6-7	NO
Inventive step (IS)	Claims	1-3	YES
	Claims	4-7	NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO

**2. Citations and explanations**

- 1.1 EP-A-0 868 886 discloses (see column 8, line 41 to column 9, line 24) a method for correctly positioning a hand-held instrument at a preparation site, comprising the following steps:
- computing position-dependent surface features from a 3-dimensional data record relating to the surface of the preparation site to determine a desired position of an implant that is to be inserted in a cavity, the area in which the cavity is to be created being represented as a 3-dimensional data record containing volume data;
  - recording at least one portion of the preparation site containing an actually visible surface feature using a camera mounted on the hand-held instrument at a specified distance from a machining tool, and displaying this as a video image;
  - superimposing a computed surface feature for the target position of the hand-held instrument, so that by changing the position and inclination of the hand-held instrument the position of the superimposed surface feature relative to the actually visible surface feature can be changed.

- 1.2 The subject matter of claim 1 differs from the known method in that a horizon line is used as the surface feature.
- 1.3 The problem addressed by the present invention can thus be seen as that of developing a simpler and less costly method for positioning the hand-held instrument. The object recorded and analysed is a horizon line, and the hand-held instrument can be positioned using this line, thereby avoiding the need for a complex method involving an overlay.
- 1.4 The subject matter of independent method claim 1 can therefore be considered novel, inventive and industrially applicable (PCT Article 33(1) to (4)).
2. The additional features specified in device claim 4 ("... transmits the camera-recorded image to a display, and surface features in the form of a horizon line are computed in the analysis unit and are shown on the display...") relate to a method for using the device rather than to the definition of the device in terms of its technical features (PCT Guidelines, C-III, paragraph 4.8). As a result, the intended limitations are not clear from claim 4 (PCT Article 6).
3. The subject matter of claim 4 is therefore limited to a combination involving the features claimed in the preamble of claim 4. EP-A-0 868 886 discloses a combination of a hand-held instrument (14), a display (12) and an analysis unit (24) for creating or machining cavities. The hand-held instrument comprises a machining tool (column 5, lines 23 to 24) and a camera (17); *the hand-held instrument transmits the camera-recorded image to a display (column 5, lines 27*

to 31), and the distance from the camera to the tip of the machining tool is known (figure 1); surface features in the form of a horizon line are computed in the analysis unit and are shown on the display.

The application fails to meet the requirements of PCT Article 33(1) because the subject matter of device claim 4 is not novel (PCT Article 33(2)).

4. Dependent claims 2 and 3 define special technical features of the invention according to claim 1. Claims 2 and 3 in combination with claim 1 therefore meet the requirements of PCT Article 33(2) to (4).
5. Dependent device claims 5 to 7 do not contain any features that meet the PCT requirements in respect of novelty and inventive step when combined with the features of any of the back-referenced claims.
  - 5.1 The additional features specified in claims 6 and 7 are also known from EP-A-0 868 886 (figure 1; column 5, lines 36 to 37; claim 18). The subject matter of these claims therefore lacks novelty (PCT Article 33(2)).
  - 5.2 The additional feature specified in claim 5 is just one of a number of obvious possibilities (see, for example, US-A-6 419 484, column 4, lines 40 to 49) from which a person skilled in the art would choose according to the circumstances without making an inventive contribution in order to solve the problem addressed (PCT Article 33(3)).